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THE JOURNAL OF SCHOOL HEALTH

Devoted to the interests and advancement of school health service and instruction. Your participation by membership is solicited.

Vol. XVIII APRIL, 1948 No. 4

HOW SAFE IS YOUR SCHOOL?*

H. W. SCHMIDT

Department of Instruction, Madison, Wisconsin

As a rule, and due to compliance with various state building codes, the modern school building is a safe building, though it will be admitted that even under these conditions there is plenty of chance for the designer to miss his cue—safety by all means. The arrangement of the building, the strategic location of stairs and exits and even the selection of materials are but a few of the factors which influence safety. No code can be written which could consider all of the many features which constitute and are included in the matter of safety. So the real responsibility lies in a great measure with the designer who as a rule has done a good job—of late. Safe maintenance and operation are other elements.

But not all school buildings have been erected during the past twenty years or so and the majority are thirty, forty, yes sixty years old; they will not collapse it is true, but aside from not meeting efficiently modern educational needs, they exhibit hazards of various kinds, to life and limb, health and property, foremost, apparently to the latter. How many have stand-pipes and hoses, have approved fire extinguishers in sufficient numbers, have the heating plants properly protected, have clean attics, and have clean and orderly store rooms (or are they just junk rooms)? One may go on and on to cite such matters which are inimical to the welfare and life of the occupants.

How about fire drills? Called for under the law, it is true, but are they enforced? One of the worst tongue-lashings the writer has ever received, and he gets plenty, was by a principal when the former set off the alarm. "That's my business and not the business of any fool who thinks he is smart." Oh well, we take it as it comes, but it did not hide the fact that there had been no fire drills; a teacher gave out this information and attempted to get order out of chaos. Any reader guilty along this or any other of the lines which will be under discussion?

Consequently, especially in the older structures, it is quite in order to go over the building with the proverbial fine comb and

*Reprinted from *Wisconsin Journal of Education.*

remedy many of the bad conditions inevitably found. Of course there are many objectionable structural features which cannot be corrected but there are plenty which can be; quite a few of these are maintenance problems and are found in even new and modern school buildings. So let us look at a few which are quite frequently met.

First, storerooms. They are prohibited under stairways, but they are there nevertheless. Clean them out and close them off permanently; locking is usually futile. Other spaces will likely need cleaning, and it is surprising what amount of material, both combustible and otherwise, can be used to feed a bonfire, or put on the dump heap. Or is there a janitor of the "saving" kind on the job? And don't forget the attic.

Then we have the heater and fuel rooms to contend with; many are not fire resisting, and fuel rooms enclosed by wood partitions are, one might almost say, quite common, including wood ceilings. The hazards and their remedy are obvious. Of course, it can't happen here!

Hand rails on all stairways is also a requirement, and we still find many stairs without them or a single one on the wrong side. In this case, if two cannot be provided, the rail should be on the right side going down. We find many balustrades, both open and solid, too low, especially dangerous where deep stair wells are involved. Do you have stair treads which slope forward, especially those of masonry materials? Plenty have been observed and trod upon, and they give one a most insecure feeling, anything but pleasant, especially if aggravated by a nice polished terrazzo nosing. Better have this corrected.

While we are speaking about polished stair treads how about terrazzo floors. Are yours heavily waxed and polished so you can use them for skating? These are met quite frequently and should of course, not be permitted; there are plenty of other finishing materials which do not produce an objectionable finish of this type.

How about fire extinguishers? Are they located so that they are readily observed or are they placed "around a corner." Why not place them in obvious sight, on a red board or background? How many persons in your building know how to operate them, or do you have to hunt around for the janitor in case of fire? If you have standpipes and hose, has the hose ever been tested under pressure or will it burst when really needed? Canvas does deteriorate. Is the valve stuck so that a sledge hammer has to be used to open it when it is needed? Is the fire alarm button readily visible and

may the alarm be operated from each floor—and the basement; rather an important matter.

Aside from regular storage spaces, it may be well to do a little sleuthing to see that the janitor—or is it custodian now—does not have secret places for his stores. Only a little while ago in checking a certain school, old it is true, the basement stair, of wood, leading to the heater room had, among other things, the following stored on the stairs and ledge aside of it: Two oil mops, a bottle of linseed oil, (no, not what you think), a bundle of old newspapers, a gallon of gasoline (in a red can, 'tis true), a box of tobacco plus pipe, old clothes, several brooms, some dust rags and a lot of junk too numerous to mention. That's an isolated case, you say; not at all. Do some checking yourself.

Then we have health hazards to contend with and though we ordinarily do not think of these in terms of safety, it certainly is a factor to be reckoned with. Whether one breaks a leg due to a bad stairway or contracts a serious cold due to ventilation is immaterial; both are human hazards. So let us look into this phase a bit too.

Air conditions in a schoolroom are important and quite different from those encountered or called for in a home—we have thirty or forty youngsters in constricted spaces to deal with and not two or three. In many cases, even in the older structures, we have a forced air system to provide the required and necessary air movement, a part of which must be outside air. But again and again we find the blower (fan) not operating, "because it costs too much" or is not considered necessary and used only to get rapid heating, a very common mistaken notion; or we find the outside air intake closed and likewise the vent, thus recirculating 100 per cent of the air. Not much of a health (safety) measure.

Filters for such a system are required, again a safeguard for preventing dust (often contaminated) from being blown into a classroom, but, they are often not installed, or removed, "because they are dirty," and too infrequently either not cleaned or replaced with new ones. If you have a plenum chamber take a look at it. Filled with stores and oftentimes just junk? It was expected. Of course storage space is often at a premium but why seek out such a vulnerable spot?

And while we are speaking of health hazards maybe the toilet rooms are also in need of attention. Absorbent floors are still found, vents are often closed because "they back down;" rarely is the reason sought.

There is just one more function to which attention may be drawn and that is lighting, especially the artificial type. There are many areas, particularly those in certain basements which partake of the nature of dungeons, so far as lighting is concerned, and are to be considered hazardous.

The writer was partially scalped once (thank heavens, only once) by entering a dark space which contained an unprotected blower pulley and belt! "the light broke," was the information vouchsafed, "and if you was to see me first I'd gave you a flash!" Oh well, what's the use. The stairways to the basement are usually ill lighted, and the same is true of many storage spaces.

Above grade the situation is usually somewhat better but on the basis of eyesight conservation (or is that not a safety factor) there are plenty of opportunities for improvement.

Well, we had better sign off before we reach the stage of diminishing returns. Though we have not exhausted this topic of safety by any means, there is enough material presented so that "he who reads may run." Hope it will help to make your school a little safer than you thought it was.

* * * * *

Health Education Fellowships,—Through funds provided by the National Foundation for Infantile Paralysis, fellowships leading to a master's degree in public health education are again being offered to any qualified citizen of the United States between the ages of 22 and 40. Candidates must hold a bachelor's degree and must be able to meet the entrance requirements of the accredited school of public health of their choice.

The fellowship consists of eight or nine months of academic work, which begins with the fall term in 1948, and three months of supervised field experience in community health education activities in a local health department. Veterans are encouraged to apply and will be paid the difference between their subsistence allowance under the GI Bill of Rights and the monthly stipend of $100 for single veterans or $150 for married veterans.

Additional information may be obtained from the National Foundation for Infantile Paralysis, 120 Broadway, New York 5, New York.

* * * * *

MEETING

American School Health Association and the American Public Health Association, Boston, Mass., November 8, 1948.

VISUAL EXAMINATION FOR SCHOOL CHILDREN

JOHN DEWITT SCHONWALD, M.D.*

Oxford, Ohio

For a number of years I have felt that the usual visual acuity test at twenty feet by the Snellen chart was generally inadequate as a means of judging the eye fitness of school or college students. It is evident that the Snellen test at twenty feet serves to select only those having myopic errors, gross degrees of astigmatism, or actual visual loss. The great publicity given by Army and Navy to such fractions as 20/20, 18/20, etc., has greatly exaggerated the significance of the test to the lay mind. Such a record as 20/20 is almost universally accepted by veterans as a guarantee of a normal eye. They become rather apprehensive when, upon returning to school, symptoms of eye fatigue develop. They frequently report to the Health Service to see if they have lost their 20/20 rating. The military services were concerned only with how well a person could see. With a few exceptions, the element of eye fatigue was unimportant to them.

In Health Service work, however, we are concerned mostly with eye performance, no matter what the limitations of visual acuity may be. Many of our good students, and faculty members also, are myopic. Usually, they use their eyes many hours a day without discomfort. Such a condition is easily found by the usual tests, and the need for correction is manifest.

A large proportion of the students, however, is in the class having 20/20 vision or nearly so. Many have normally functioning eyes, but a substantial remainder are riding under false colors, since, in order to maintain 20/20 vision for distance and a satisfactory reading adjustment, they are forced to make abnormal monocular and binocular muscle adjustments.

In Student Health services, this group has been glibly passed by, in the hope that symptoms of their difficulty will appear and be recognized before serious damage has been done to either the eye itself or to the academic accomplishment of the student. These students frequently appear at the Health Service during the preparation period for examinations, and request headache pills or other medication. They do not, in general complain of loss of visual acuity, but rather, they are unable to use their eyes for intensive study required at this time. Some lose interest in school work, turn to athletics, or stop school entirely. A number of factors may

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be implicated, but by far, most of these cases are associated with one condition; i. e., fatigue of the ciliary muscle.

Two types of refractive errors are usually associated with the overwork of the ciliary muscle; namely, hyperopia, and astigmatism of low degree. Astigmatism is the condition when the cornea and/or the lens of the eye is not spherical in shape, but distorted to such a degree that a perfect retinal image cannot be produced under any circumstances. If the distortion, however, is not great, the eye attempts constant readjustment of the ciliary muscle, attempting to compensate for this deficiency by alternately focusing linear objects in opposite meridia, ever seeking for a clear image which is not obtainable. This overwork of the ciliary muscle results in early fatigue and symptoms of headache and blurred vision while reading. It is possible to detect this condition without too great effort by the use of a "crossed cylinder." This test could be made a part of a routine entrance procedure.

The second condition responsible for ciliary fatigue; namely, hyperopia, can also be readily found at the time of taking the Snellen record at twenty feet. This may be accomplished by placing a pair of glasses fitted with plus 0.75 spherical lenses before the eyes of all students having 20/20 vision. Their ability to read through such glasses is proof that the eye has less than the amount of basic refracting power considered normal.

For a better understanding of visual testing by students, teachers and physicians not familar with ophthalmology, a consideration of the following explanation of errors of refraction may be helpful. Generally, this subject has been explained on an anatomical rather than a physiological basis. The normal, myopic or hyperopic eye is usually described in terms of the relative size of the eyeball, or the theoretical location of the point of focus, as on, in front of, or behind the retina.

It should be more understandable, however, to define these conditions in terms of varying focal power of the eye. It must be constantly borne in mind, however, that all definitions assume that the focal power of the eye is at its minimum degree, when the definition is applied, or in other words, the ciliary muscles are fully relaxed at this time. It is possible through the act of accommodation, only to increase this power; never to reduce it below this minimum value.

The normal eye, when so relaxed, has just a sufficient power of refraction to focus the parallel rays of light, from objects situated twenty feet or greater from the eye, on the retina, without

the use of accommodation. The myopic eye is inherently endowed with more than this amount. This excess can not be reduced except by the use of concave lenses.

The hyperopic eye, however, has basically less than the requisite power to focus images accurately upon the retina, and must at all times exert some accommodation in order to see clearly. This is true for all distances, but the effort is much greater at the reading distance than for distant vision. As long as accommodation can be exerted without fatigue, however, the hyperope has clear vision at any reasonable distance.

Conversely stated, an eye capable of clear distance vision through plus spherical lenses must have basically less than normal refracting power. This is the foundation for the "fogging test," usually used to detect manifest hyperopia.

Dr. Bradshaw suggested several years ago that we should devise a simple refraction technique to be utilized by teachers, nurses, or school physicians in an effort to screen out that group of students who, while having a nearly 20/20 Snellen record, are apt to develop fatigue symptoms from use of their eyes in the school program. It is with this in mind that I am making three suggestions for the betterment of eye testing in school work.

1. Replace the usual Snellen chart by a small chart having five rows of letters, all of the one size, normally visible at twenty feet. Such a chart can easily be illuminated by a single lamp with a reflector, or better, placed in a small cabinet made of thin wood and illuminated by two small bulbs (25 to 30 watts). This cabinet weighs only a pound or two and can easily be made in any school shop for a small cost. (See Fig. 1.)

2. Visual acuity should be recorded as the greatest distance in feet from the chart where clear vision is possible, and where twenty feet is normal. This chart and method has several advantages over the usual Snellen technique. (a) The cabinet is light, inexpensive, and can be easily carried to the place where mass physical examinations are being done. (b) It is impossible for students to memorize the five rows of letters when they approach beyond twenty feet from the chart. (c) The fact that some students read the chart readily at twenty feet and others must approach to even one or two feet makes a strong mental impression on the deficient student. After using this technique for several years, I am convinced that the distance from the chart, rather than the size of the letters seen, is more impressive to the lay mind. (d) When visual defects are reported to the teacher as the

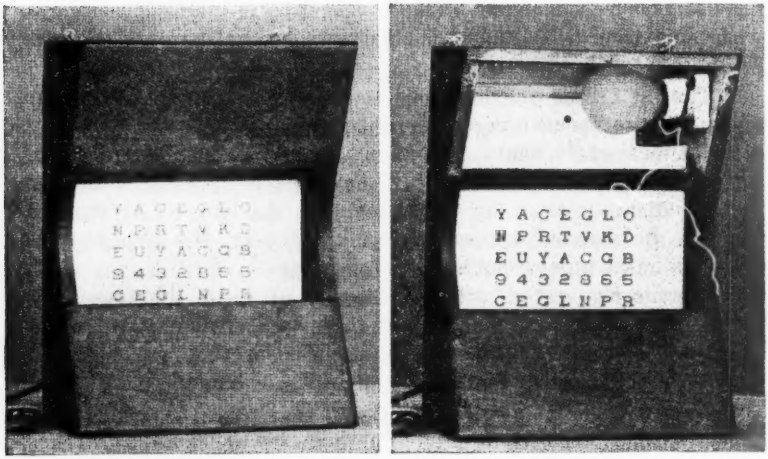

Fig. 1. The letter chart was devised by Dr. Emory W. Sink, Student Health Service, Univ. of Michigan. The dimensions of the chart are 8½" x 12". The illuminator box has outside dimensions—9½" x 13" with a depth of 4½" at each end. It is constructed of wood—½ inch thick. The lights are placed, one at each opposite corner and should be of low candle power. Two pieces of wood ¼" x ¾" extend across the box and should be so adjusted as to eliminate glare on the chart and adjust the degree of illumination to the ten foot-candles recommended by the Eye Committee of the American Student Health Association.

greatest distance for effective vision, it has a direct application in the seating arrangement of students in the class room, relative to the distance from the blackboard. (e) The distance from the chart is also a rough measure of the degree of myopia present, if such be the cause of poor vision.

3. Students who have normal vision at twenty feet should be further tested by placing before their eyes a pair of frames fitted with plus 0.75 spheres. (Plus 1.00 to plus 1.25 spheres may be used for young children who are apt to be hyperopic normally.) Clear vision through these glasses indicates hyperopia and suggests that the student should be watched for evidences of eye fatigue.

An additional test might also be included under some circumstances to detect the presence of astigmatism of low degree. This is accomplished by rotating a crossed cylinder ($-025 = +025$) before each eye separately, while standing at the greatest distance from the chart where clear vision is had. Decided differences in visual acuity in any two positions of the crossed cylinder is indicative of astigmatism. Decided clearing of vision with the cylinder in any position indicates astigmatism of a sufficient degree to usually call for an ophthalmological examination. Reprinted from the *Journal-Lancet* of January 1948, p. 10.

ADVENTURES IN HEALTH EDUCATION*

ARTHUR H. STEINHAUS

"Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" states the Preamble to the Constitution of the World Health Organization.

On a Saturday evening a poorly dressed stranger made his first appearance in a Bulgarian tavern on Chicago's West Side. The young man, himself Bulgarian, promptly entered the feature folk dance marathon. Instantly his superior skill captivated the crowd. When he insisted that the air was too thick for an endurance test, the windows were opened. Easily winning the five dollar marathon prize, he "set-up" the crowd and fell into conversation with them, contributing recent news from the fatherland. His acceptance by the crowd was complete. In subsequent visits the conversation always turned to subjects of personal health, problems of the home, and health of babies. And the crowd listened. Surely he would visit in their homes! He did, and found mothers and wives also accepting his words. Thus it seemed natural that this "health man" should be heard on Sunday afternoons in the centrally located Bulgarian church, with whose pastor plans for such meetings had long been prearranged. They came—men, women, and children—to hear their own countryman tell how to ventilate homes; how to feed children and care for their ailments; how to live simply and healthfully in the New World.

Throughout the winter, long after he had earned his college credit in health education this student of George Williams College carried on with the group. Why?—because fathers, mothers, and children kept coming on Sunday afternoons.

In a Y.M.C.A. Boys' Department there had been talk about what boys eat and then one day each boy was asked to list the foods he had eaten the past two days. Vegetables were conspicuously absent. A few days later four half-grown guinea pigs appeared in the department, to live in what had been a candy case. Delighted by the new pets, boys asked to help care for them. This care included daily weighing of the pigs and recording the results by graphs on wall charts where everyone could see them. All of the pigs were fed alfalfa meal and oats; and two were given in addition some fresh green vegetables. Within two weeks painful joints, loss of weight, digestive disturbance, and inflamed gums were found in the non-vegetable eaters, whereas the others enjoyed

*An account of student course projects in Health Education. First published in *George Williams College Bulletin.*

normal growth and good health. Shortly one of the pigs died of scurvy and the other, now noticeably sick, was given orange juice and green vegetables. Happily it was restored to full health. Pigs and diet had been subjects for endless conversations. When again one day the boys were asked to put down what they had eaten, vegetables showed increased popularity.

Not so different was the scene, reported by newspapers as a "rat race at the Y.W.C.A." Here four young rats were fed coffee, toast, and orange juice, while four others from the same litter, in an adjoining cage, were given milk, oatmeal, and orange juice. Literally thousands of women watched the oatmeal eaters race to perfect young adulthood in five weeks, while eaters of the more popular breakfast menu had shoddy pelts, weighed half as much, and had not grown. Pictures of rats and the Y.W.C.A. secretary were published in the papers, and as a result someone demanded that the humane society investigate. But the inspector would bring no charge where rats were fed what many women choose for breakfast, so the young woman continued her project.

Education is defined as producing change in people, and those who want credit for the course in health education at George Williams College must make an earnest effort toward changing somebody's thinking and living from less healthful to more healthful ways. Readings, lectures and other talk about health are all secondary and but aids to the one objective, that of guiding desirable changes in the physical and mental health of people.

Such changes engineered by students in their late afternoon and evening work situations, sometimes greatly handicapped by the rigidity of schedules and job requirements, are exciting instances of ingenuity and creativity in educational method. A few further examples will illustrate student resourcefulness and at once suggest what can be done by an agency that desires to serve the physical and mental health needs of its clientele.

In most instances the cause of obesity is overeating. One student, after checking with their physicians, organized seven men into a weight-reducers club. When two weeks of undirected efforts proved fruitless, he recommended diets, provided literature, and stimulated intro-group competition and mutual admonitions. In nine weeks six of the seven lost a total of one hundred sixty-eight pounds. The seventh, a physician, was unsuccessful.

Another student guided thirteen men to lose one hundred fifty-six pounds in twenty days. A young woman made a group of girls in an institution calorie conscious with her poster: "Grace, poise,

beauty, charm—its the extra calories that do you harm." A reducers table was formed for eight who were willing to curb a little the one remaining pleasure offered them three times daily. At this table it became popular to discuss safe reducing diets. The eight girls lost a total of twenty-five pounds in two weeks.

A tuberculosis case-finding campaign in a settlement house called for good publicity, mass education, and cooperation with the local tuberculosis institute. It resulted in 1252 chest X-rays.

Fifteen Negro youths in a boys' club discussed their conceptions and misconceptions of venereal disease. Later a physician came to talk about syphilis. The group decided to go *en masse* to a clinic for a test. The tests were all negative.

Eight girls whose Y.W.C.A. physical examinations disclosed them to suffer severe dysmenorrhea formed a special group to learn and practice the Billig exercises. Careful reports and records showed that half of the girls experienced complete relief within two months.

With fourteen fellow hospital maintenance workers as his "class," another student, in unobtrusive fashion, directed lunch-time table talk to matters of health. Visits to the workers' homes had shown him their sadly restricted bathing and toilet facilities. Back-of-the-scenes work with hospital authorities brought rejuvenation of shower rooms and a towel service. Casual conversation incited social pressure. Result—ten baths per day where there had been none. Conspicuous display by the student of his own lunch brought comments about tomatoes and lettuce. When his bottle of salad dressing was consumed around the table, it was a "good sport" who bought the next one. They called him "professor" and "school-boy"; liked him, and started outdoing each other toward better diets.

Ernie's elementary school had no health services when he attended fifteen years ago, so he decided to do something about it. The Sister Superior was alert and interested. Ernie schooled himself in the best procedures for detecting eye and ear defects, nutritional disorders, signs of incipient disease, and other handicaps; collected materials and counsel from many sources; and in December faced his first class of seventeen nuns. There have been seven sessions and the end is not yet. Slowly health services are coming into general practice and a T.B. testing program for the school is ahead—because a student has gone back to teach his teachers.

Kiwanis clubs sometimes sponsor underprivileged boys clubs. There was one which rendered this service through a department

of the Chicago Y.M.C.A. But why should boys' club members not have a physical examination? The Kiwanians had no answer so they appointed two physicians and a dentist from their membership to see that this was done for their own boys' club. The "less chance committee," entrusted with the club project, agreed that Kiwanians should take the results of the examinations into the boys' homes to insure that defects were corrected. If necessary, they would see that the bills were paid. This happened because the student who counselled the club on his part-time job did a little health engineering.

Every year some one becomes interested in dental health. Sometimes it's a girl's club, again it's a boys' play group that is brought to the point of visiting the dentist. Last Autumn a Junior Hi-Y leader, working as a volunteer "wormed" a dental health program into one of Chicago's elementary schools. The principal was willing; the boys were made tooth conscious; the dental society showed films to the entire school; and a dental examiner was secured from the Board of Education to examine the pupils.

Attention to health superstitions got into courses in social problems and political science for evening classes serving a Negro district. Discussions of superstitions collected by forty students sometimes rivalled political science in holding interest. A "post test" suggested that some progress had been made in breaking the "fear chains." Another student became an authority on Mexican culture in Chicago slums. With it came a better understanding of "witches" and the "evil eye," also opportunities to argue, reason, and convince young Mexicans that logic and truth have better answers. But the battle against superstition is always fought against great odds.

With a desire to experiment in parent education Mr. W. went to his landlady. She could think of eight families with young children, that might be interested. Visits to these neighbors brought encouragement. The first session, held in one of the larger apartments, was attended by five parents and a child. The fifth session brought to a "final examination" eleven parents, with the right answers. Discussions showed that new insights had been gained regarding the parental role in the child's mental health. This student also formulated a plan for working with parents of boys. He intends to try it in the Y.M.C.A. that has just called him to the Secretary-taryship.

Many other changes in the living habits of people may be credited to the work of students. A full account would include such changes as the following:

—consumption of more milk in a Railroad Y.M.C.A.
—eradication of athlete's foot in a club group
—elimination of hazards on a playground, and the introduction of more safety measures
—implementation of new policies for physical examinations of boys and men
—more baths for boys and girls in Maxwell Street, on the North side, and the South side
—"charm classes" that considered subjects from hair-do to what-can-one believe
—new attitudes regarding sex for boys and girls and their parents
—cooking classes, sing-songs, and play stores to influence food purchasing and eating habits
—attempts to eradicate children's fears
—mental therapy in the program of a football coach
—children's stories and plays created to change food attitudes, and stories of Greek heroes and Zulu chieftains to induce bodily cleanliness
—five cent fines to curb spitting in the swimming pool
—check lists to habituate balanced living
—saner boy and girl relationships to influence social adjustments
—the slogan "no nails no males" in a program to dissuade nail biting
—athletics and friendship to manage combat neuroses in veterans and enuresis in children
—art work to help unadjusted personalities
—extermination of cockroaches from the kitchen of a youth agency

Health education is any purposeful effort that helps people to change their ways of living, to add years to life and *life* to years. Though the goal is clear, people are different, and the way is always new. It is adventure.

* * * * *

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EDITORIALS

Emily Perkins Bissell of Wilmington, Delaware, died recently at the age of 86 years.

Miss Bissell was the originator in this country of the Christmas seal stamp sale which has been the major financial factor in financing the National Tuberculosis Association in its very successful campaigns to control and diminish the amount of tuberculosis in this country, the death rate from the disease having been pushed from first place on the list of the causes of death to sixth.

The first year of the sale, 1907, it netted $3,000; last year more than $18,000,000.

These two accomplishments are a monument to a brilliant idea, carefully and energetically fostered, and made possible by the widespread efforts of the National Tuberculosis Association to inform our people that tuberculosis is preventable and arrestable. These efforts have been the most successful accomplishment in health education this century has seen.—*C. H. K.*

* * * * *

A few weeks ago, Dr. Wingate M. Johnston of Winston-Salem, N. C., one of the trustees of the American Medical Association, stated before the Council on Medical Education and Hospitals of the A.M.A. that unless the medical profession takes steps to meet the need for more family doctors, the politicians who promise free medical care to everyone will find ready followers.

There are already too many specialists who know ears, eyes, throat, etc., but do not know man—the whole patient. Time was, not so long ago, that a physician became a specialist after long practice and experience in general medicine, and later specialized because of peculiar aptitude in the field chosen. Now he specializes immediately after graduation from medical school via "special" hospital training, an examination before a "special" board, a "special" certificate, and so on.

If, as, and when a serious financial depression arrives, what will become of these "specialists"? People go to them when funds are plentiful; when funds are scanty they will go back to the general practitioner. It would be most unfortunate if these "specialists", after years of practice in their special field only, were forced back into general medicine. Where else is there for them to go?—*C. H. K.*

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On page 115 of this issue is a discussion by Dr. Carl C. Zimmerman, an eminent sociologist, on the "Third Crisis in Family Life". He mentions the breakdowns in family life in Greece and, centuries later, in Rome, prostitution being substituted for the family relationships. In France, noted for licentiousness, in fairly recent times there has been a similar situation. In Greece and in Rome, the sexual situation was accompanied by periods of too much money and sybaritic customs and waste and licentiousness. These social weaknesses were accompanied by rampant political dishonesty and followed by national collapse. The French situation runs closely parallel. Twice within our present generation she has been saved from annihilation by the intervention of more virile nations.

One who reads the newspapers and thinks of current events wonders if the people of the United States are not following the trails of these nations, whose decadence was first evidenced by the looseness of marriage customs and laws.

In New York State, where there is only one legal permission for divorce, adultery, our papers have been crowded with announcements of the granting of annulments of marriages by court decisions, and often for the flimsiest reasons.

An annulment is a "legal" declaration that the marriage is set aside, rendered void, even though the man and woman have been living together for years. These people and many divorcees remarry while having several mates still living.

If the marriage is null and without effect, where does this leave them ethically and morally?

What is the status of their children as to legitimacy?

Whither are we going?—*C. H. K.*

ABSTRACTS AND NOTES

HEALTH INSTITUTE FOR TEACHERS

Sponsored by
THE AMERICAN SCHOOL HEALTH ASSOCIATION
CALIFORNIA DIVISION

October 25, 1947

Report Submitted by JOHN L. C. GOFFIN, *President*

The second annual Health Institute was held in the auditorium of Polytechnic High School on a Saturday so balmy that no one could have been blamed if he had yielded to Nature's blandishments and "played hookey from school".

However, so intense was the interest in this program that 1200-1500 school people filled the auditorium and overflowed into the gallery.

The first speaker, *Dr. Frederick J. Hacker,* well-known psychiatrist discussed *"Emotions and the Learning Process".* We present this abstract of his address.

The old theory that the learning process was a trick of memory in which facts were recorded as on a phonograph record has been given up and superseded by the modern psychological concept. This concept is that separation between so-called emotions and memory functions are purely artificial and only of didactic value. The personality of every individual functions as a whole. This concept lays the foundation for the psychosomatic idea which abolishes the artificial separation of body and mind. Emotions and the learning process both are functions of the total personality, influencing each other and being in many ways interdependent.

We are familiar with the fact that if a person is emotionally upset, his interest in the outside world is limited. When you are under emotional strain you cannot relax enough even to read a newspaper. We all have a greater or less store of emotional energy. The person who overdraws or exhausts his emotional reserve is a potential psychiatric patient.

School children must be free of inner tensions, emotional conflicts if they are to be effectively educated. Children have a natural desire to learn about the world and to master the conditions of their environment. The increase in power over or mastery of the surroundings serves as a defense against their inner problems. When his inner drives master the child he is unable to cope with conditions outside himself. Thus he may be intelligent, have a high IQ, but be a failure in reading, spelling, or arithmetic.

Blocks to learning may be physical as well as psychological. Here, we are stressing the psychological, the emotional. The emotions that are most disturbing are those that are suppressed. For example the excessive day-dreamer is preoccupied with his emotional conflicts. He may be forced temporarily to give attention, to learn, but he will pay dearly in terms of later adjustment.

An even more serious result of emotional disturbance is the conversion of psychological problems into physical disease—escape into sickness. Diseases such as asthma, hay fever, gastric ulcer, and colitis may be aggravated or precipitated by emotional conflicts. Regardless of the cause of the illness, a sick child cannot learn.

Many manifestations: physical symptoms, rebellion against authority, inability to concentrate may be expressions of emotional conflict and may hinder the learning process.

These are not problems for the psychiatrist, the psychologist, or the social worker alone—they are primarily problems for the teacher—to recognize and understand these early signs of maladjustment. Many of these, they can correct with wise and understanding guidance. Children with these problems used to be called "bad". Now it is the fashion to call them "neurotic", and to send them to some agency or clinic. No teacher who is emotionally disturbed herself can do much to help an emotionally disturbed child.

The emotions are not always enemies of learning. They can be diverted to constructive ends. There is not and never can be a substitute for the interpersonal relationship of teacher and pupil. Children want to please the teacher they like. They want to learn that which the teacher makes interesting to them. The teacher who understands the emotional problems of her pupils and who can establish a good personal relationship with them is a good teacher. For the few she cannot help, the experts are available.

The second speaker, *Dr. E. Kost Shelton*, endocrinologist, discussed *abnormalities of the endocrine glands as they affect the behavior of children.* He showed a large number of lantern slides illustrating the conditions described and showing the results of treatment. Many of these results were striking. He emphasized the fact that many children are treated with endocrine drugs, especially thyroid, when such treatment is not indicated and may be harmful. For example, giving thyroid extract to a child who has no thyroid deficiency actually creates a thyroid deficiency, which then requires more thyroid to relieve it. Treating obesity with thyroid is unscientific because obesity is caused by excess

food and thyroid speeds up metabolism and increases appetite.

Disease does not affect the underlying constitution, but evidence suggests that the type of constitution determines the type of physical and psychic disorders the individual is predisposed to. For example, the tall, thin, nervous, leptosomic type is one that under stress may develop schizophrenia. The short, thick, stocky, lethargic type is pre-disposed to manic depressive states. The first may acquire gastric ulcer, the second gall-bladder disease.

Developmental anomalies of the cortical centers of the brain, such as Mongolism, are not helped by endocrine treatment. Parents should be told that no treatment will help and should be saved from spending money on quacks. These children should never be called idiots, any more than a four-leaf clover is called an idiot. They are accidents of nature. To call such a child an idiot breaks its mother's heart.

A common endocrine disorder is hypothyroidism. If the thyroid secretion is deficient at birth the condition is called cretinism, in adults, if extreme, myxedema. The puffiness of tissues of face and body is due to water in the tissues. Thyroid extract is curative if given early enough and in the correct dosage, but it must be kept up throughout life. A low basal metabolism alone is not diagnostic of hypothyroidism. There must be other findings, e.g. high blood cholesterol, x-ray evidence of bone retardation, etc.

Deficient pituitary secretion, tumors of the adrenals and of the pituitary gland, and deficient ovarian secretion cause various developmental abnormalities. These can often be helped by endocrine treatment or surgery.

There are many conditions that cause inferiority feelings among pupils which are not of endocrine origin, but due to heredity, faulty diet, etc. These may be mentioned: tallness, shortness, hairiness in girls, acne, obesity, undescended testicle in boys, delayed genital development, etc. If shortness is caused by lack of endocrine secretion, it can be helped. If the parents are short, nothing will help. Unusually tall children should be encouraged to be proud of their height. Obesity must be treated by diet and psychotherapy. Hairiness, unless extreme (when it may be due to an adrenal tumor) is a hereditary characteristic.

The important thing, when the teacher has a pupil who has behavior or learning difficulties due to some physical or mental or developmental anomaly, is to see that the child gets into expert hands and has the proper treatment. In all cases the teacher must

not expect the child to exceed his threshold of effort and accomplish the impossible.

The chairman announced that 35 people had joined the American School of Health Association during the morning session.

The afternoon session was presided over by Cora Lee Danielson, Supervisor of Remedial Instruction, Los Angeles City Schools. She introduced the last speaker, *Dr. Florence Mateer,* the popular clinical psychologist from Claremont Graduate School, who spoke on the topic *"Mental Health in the Classroom".*

Mental hygiene is the health of the school child's behavior, thinking, and learning—everything he does.

Three factors are fundamental to mental health: the conditions in the school, the health of the teacher, and the health of the child. In the school room temperature, lighting, color, quiet, space —all affect mental health and influence learning. A child can't do his best work if he is cold or if the temperature is too high. The teacher should regulate the lighting, which should be adequate. Some children with vitamin A deficiency are bothered by bright light.

Color is very important. Lavender and purple are depressing. Blues are cold. Green and yellow are most satisfactory. Pink is stimulating. More study should be given to color in the classroom.

Classes should be small enough to give children individual attention. Children should not be taught as a herd. No teacher can solve the problems of 40 or more individual children. It is also easier for the child to "belong" to a smaller group.

Loud noise is distracting and affects mental health and learning. Building noises, street noises, etc., are bad. (Just then a police siren shrieked outside—Dr. Mateer said: "A perfect example of what we are discussing".)

No teacher should have the responsibility of educating and guiding children unless she is solving her own major problems. During the war many teachers with relatives in the armed forces were restless, worried, and discouraged. General health is important. The Health Division of the Metropolitan Life Insurance Company recommends a check-up for teachers every 6 months.

The dress of the teacher is important. Children love bright color. They respond better to a teacher who looks her best. The teacher feels and does better also.

Teachers should watch their diction. Speech should be varied, not dull and hackneyed. Learning should be an interesting adventure.

A child cannot learn unless he is well physically and mentally. We do a lot for the delinquent child and neglect the chidren who are relatively stable and healthy. The child in school must get security, stability, and success. The child must feel wanted in the group. He must feel that he is useful to the teacher and the class. Children want to know what to expect. Grades, while important to parents, mean nothing to young children. A pat on the head, a word of approval, a gold star they *do* understand.

An unhappy, emotionally disturbed child cannot learn. Children from insecure homes must be given security in the classroom. If a child cries, writes backwards, is exhausted by 10 o'clock, is afraid to catch a ball, who is going to help him but the teacher? The expert doesn't have a chance to observe these things. The teacher should observe and report these signs of ill health.

The teacher who wishes to teach successfully must find out about the home environment. Does the child have a room to himself? Does his mother scold him? What is his play situation? How adequate is his diet? What motivation does he have outside of school?

All these factors—the environment, the teacher, and the child himself—must be right if we expect to have mental hygiene in the classroom.

* * * * *

Conference on Education of Hospitalized Children,—Improvement of educational opportunities for children with orthopedic defects who receive their schooling in hospitals and convalescent centers was the subject of a conference at Atlantic City recently, sponsored by the National Foundation for Infantile Paralysis. The conference was attended by 219 representatives from 32 states, including teachers in hospital schools, hospital and school administrators, physicians, physical and occupational therapists and social workers.

Prior to the conference, a cross-section survey of 18 institutions, made for the National Foundation by Dr. Alice V. Keliher, Professor of Education, New York University, and Amy Hostler, Dean of the Mills School, New York City, revealed where important improvements in educational facilities and methods are needed.

Conference members agreed that therapeutic benefits of education are a significant phase of total treatment, and that all-day planning is necessary for a satisfactory program for each child. They recommended that hospital staffs caring for the handicapped child form a professional "team," with frequent case con-

ferences built around the child himself. An important member of the "team" should be the teacher, who is too often segregated from the professional staff. Families should also be introduced to hospital planning, so that the child's parents may better understand his needs.

The handicapped child who depends more on mental than physical skills needs more than just "text-book" learning, educational leaders at the conference asserted. Visual aids and group activities in which children learn from other children are especially important. Such activities are possible, even for bedridden patients, when carefully planned. Personalities, as well as minds, are developed by these methods, and social needs satisfied.

Group work in science, art, dramatics, social studies and literature was described by representatives of institutions which already have adjusted schedules and space to permit the development of such programs on a full-day basis. Dynamic recreation, as opposed to passive entertainment, was emphasized.

The conference stressed development of a widespread public information program to insure better understanding of education goals and more generous financing. One of the goals is more opportunity for special training of teachers in hospital schools.

The group recommended that national conferences of this type be continued, and that small regional, state and county seminars be instituted in all parts of the United States to evaluate present local progams and to inauguate specific improvements. Representatives of the whole hospital team—doctor, hospital superintendent, nurse, therapists, social worker, as well as parents, teacher and school administration—should participate in this total planning. (*Sally Lucas Jean.*)

* * * * *

The Third Crisis in Family Life,—Western society, of which the United States is the most extreme present manifestation, has gone through two great family crises during its history and is about to reach the maximum development of a third, says Dr. Carl C. Zimmerman, Harvard University sociologist, in his new "Outline of the Future of the Family" (pp. 128, price $1.75 from the Phillips Book Store, Harvard Square, Cambridge, Mass., 1947).

Between 450 and 250 B.C. the Greek family system broke up. Between 300 and 550 A.D. the Roman family system broke up. The spread of Christianity brought about a revival of family life, which has now largely lost its force, the decline coming first "in the upper strata and social climbers" where it has been conspicuous for several centuries.

This loss of family-mindedness is largely responsible, in Dr.

Zimmerman's opinion, for the increasing crime, brutality, and inhumanity in modern civilization. Family life's the source of altruism, and it is always a national calamity when "the controls of society come into the hands of men and women who do not possess judgments biased by an immersion in fundamental humanism." After all, the fact is that "parents differ from persons who are not parents. Those who have three or four children are different from those with only one or two." Strong family life and sound civilization have always gone hand in hand. When one has decayed, the other has decayed.

How does the present break-up of family life differ in detail from that in Greece or Rome? Dr. Zimmerman thinks one of the outstanding differences is the extraordinary hyprocrisy with which the break-up is now surrounded. The Greek or Roman made no apologies for adopting prostitution as a substitute for marriage. The modern American "seeks to secure ethical sanction (church wedding) for each new liaison. This is announced as the perfect and ideal achievement to last until eternity." The Greek or Roman "would have made no boasts that he improved either himself, marriage, or the family by his constantly changing sexual arrangements."

Dr. Zimmerman (listed in "Who's Who" as a Congregationalist) thinks it is high time for Christianity "to busy itself now and in fundamental fashion with measures to halt the development of anti-familism," instead of trying "to gain popularity by playing along temporarily with the anti-familism of our bourgeois and intellectual classes." "If it weakens its doctrine or, by condoning the present changes in the family, attempts to keep its favor among the present dominant social classes, it will in time have neither friends nor doctrine."

What is to be done? "The family is a free-will moral, religious, and social institution. If anything at all is done about the family it will have to come about finally by bringing a change into the hearts of the people. People do not change ideas about such an institution as the family until they are fully informed.

. . . A new world has to be built on understanding of our grave problems, and not on compulsion and fright." Dr. Zimmerman therefore declares that "Modern society needs a large intellectual class which really understands the present decay of our family system, its devastating social consequences, and who are willing to tell the misinformed and confused public the truth." He believes that much of the teaching about the family, in American colleges, is unscientific.

There is, obviously, no easy solution such as bribing people to have children ("baby bounties"). But a pre-requisite is to "return the family to public control." For this purpose Dr. Zimmerman believes that the States must be deprived of their present power to make as widely different laws as they please. A National Family Code (such as exists in many other Countries) must apply uniform measures throughout the United States. This must be backed by a Family Supreme Court, containing not merely lawyers but social scientists and religious educators.—*Family Life.*—From Health Education Journal, Los Angeles City Schools, June, 1947.

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Infantile Paralysis,—So that parents may know what to do if infantile paralysis strikes again this summer, the National Foundation for Infantile Paralysis for the second year is distributing a folder of information through the schools. The publication, "A Message to Parents about Infantile Paralysis," contains facts about the disease, lists precautions and advises where aid may be obtained. The folder will be given to pupils in public, private and parochial schools throughout the country to take home before the close of the spring term.

Parents are told that the disease need not be feared beyond reason—that of the people who get infantile paralysis, very few contract it in paralytic form and with early diagnosis and good care, the large majority recover without crippling. The importance of prompt treatment, however, is emphasized. Parents are urged to watch for symptoms in time of epidemics, and to call the doctor immediately, if symptoms, as described in the folder, appear.

Precautions listed include: washing hands frequently, especially after toilet and before eating; protecting food and garbage from flies and other insects; staying away from crowds and new contacts; avoiding swimming places which may be polluted; guarding against chilling and over-fatigue; consulting the family doctor before having throat and mouth operations during the epidemic months. Experience has shown that epidemics occur in some parts of the country between the spring and fall months every year.

Families are informed that local chapters of the National Foundation are prepared to give financial aid, if expenses for medical and hospital care cannot be met. Chapters, located in nearly every county of the country, have March of Dimes funds for this purpose.

With the assistance of educational authorities and teachers, the message will reach the homes of some 30,000,000 school chil-

dren, bringing reassurance and guidance to communities in time of emergency.

* * * * *

Brucellosis,—The erroneous concept still is prevalent that brucellosis is a regressive, rare and self-limited disease. Infection of nonimmune persons must be expected to continue as long as infected food is ingested or there is contact with infected cattle, goats, swine, sheep or horses. Some idea of the importance of the existing problem can be gained from statistics compiled for the state of Iowa, where 638 cases were reported in 1946.[1] Histories obtained in 96 per cent of the cases showed direct contact of the patient with hogs and cows before the recognized onset of the illness in 74 per cent. The remaining 26 per cent were assumed to have contracted the disease through ingestion of unpasteurized dairy products.

The total number of cases reported in the United States has averaged about 4,000 yearly for the past several years. Only the relatively severe acute illnesses are diagnosed and reported. Chronic infections outnumber the acute illness by a ratio of at least 10 to 1 but these chronic infections are rarely diagnosed. If 4,000 cases are reported yearly it is probable that from 40,000 to 100,000 infections occur yearly. If only 40,000 cases occur annually, 400,000 cases will have occurred in a ten year period, with an unknown percentage of this total accumulating from year to year as persistent or recurrent illness.

Failure of recognition in a large percentage of chronic cases of brucellosis is to be expected except with the most careful study. The concept has not yet attained general acceptance that brucellosis is no less protean than tuberculosis or syphilis, that it may simulate many other conditions, including psychoneuroses and that it may coexist with any of them. There are no pathognomonic signs and no single uniformly reliable diagnostic procedure. The blood agglutination with Brucella is frequently negative in the acute illness and usually negative in the chronic illness; it has significance only if positive. It is still used as the one single criterion of diagnosis by a majority of practitioners, although positive cultures repeatedly have been demonstrated in the absence of blood agglutinins. The employment of all available laboratory procedures, in addition to the exhaustive clinical study—complete blood counts, sedimentation rates, immune reactions, intradermal tests and culture—may be essential diagnosis to diagnosis.[2]. Rarely is it justifiable to draw conclusions from the intracutaneous reaction alone.

A defeatist attitude toward treatment, not justified by results

reported by various methods, also prevails. Development of still better methods in diagnosis, treatment and prevention, in animals and man, depends upon an increasing "brucellosis-mindedness" and continued investigation. The disease continues to be a major public health problem. Pasteurization of all dairy products must remain the greatest bulwark against human infection until methods of control can be perfected. Abstracted from Jour. A.M.A., of July 5, 1947, p. 876.

1. Brucellosis in Iowa, Iowa news, J. M. A. 134:197 (May 19) 1947.
2. Harris, H. J.: Brucellosis: Advances in Diagnosis and Treatment, J. A. M. 131: 1485 (Aug. 31) 1946.

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Treatment of Scabies,—To the Editor:—An entire family consisting of 2 adults and 2 children is under treatment for scabies. The condition has been present for over six months. They have been under the care of competent men and have received numerous courses of sulfur and benzyl benzoate with apparent cures, only to have recurrence in one or two weeks. The treatments were properly applied and followed by correct sterilization of the personal and bed clothing. The family lives in a one story single house. How long can Acarus scabiei live away from the human host (i.e., on sheets or clothing)? Can the scabies mite live in furniture, toys and other household fixtures and for how long? Is it necessary to remove the family temporarily and fumigate the house to rid the house of Acarus scabiei? What method of treating the bedding is best?

Irving Saffran, M.D., Dorchester, Mass.

ANSWER.—Experiments by Mellanby, Johnson, Bartley and Brown (*Bull. Entomol, Res.* 33:267, 1942) indicated that at 55 F. and 90 per cent relative humidity the majority of itch mites died within one week when kept off the human host. A few survived as long as 14 days. At temperatures below 55F. survival times were shorter. In careful experiments carried out in England on volunteers during the war (Mellanby, Kenneth: *Brit. M. J.* 2:405 [Sept. 20] 1941) success was attained only twice out of sixty-three trials in transmitting the mite through infested underclothing and blankets even though conditions were made as favorable as possible to successful transmission. On the other hand, even slight personal contact serves as an effective means of spread. Most instances of persistence of the infestation in families are the result of incomplete treatment without the repetition so necessary to complete eradication of second or third generation mites. Although benzyl benzoate is the most potent carcopticide known, it is difficult for the patient to apply the liquid or cream preparations satisfactorily himself. Sarcoptes is sensitive even to moderate heat. Adult

females in the experiments noted were killed in ten minutes at 120 F., in thirty minutes at 117.5 F. and in twenty-hour hours (not more than forty-eight hours) at 82 F. It would appear from these experiments that one might kill the mites in a house in one week and by maintaining a temperature of 85 to 90 F. Jour. A.M.A., July 5, 1947.

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Can the Machine Supplant Man?,—One of the greatest handicaps to human progress is the groundless fear of technological unemployment; notwithstanding the fact that every discovery and every invention ever made, instead of depriving people of a chance to work, has opened up many more opportunities for employment. This has been true on the farm, in the office, and in the factory.

It is true even in the professions. Some teachers see the recent exodus from the schools partly as an instinctive desire to anticipate the day when the motion picture, the wire recorder, the radio, and television will make flesh-and-blood teachers superfluous. This of course, can never happen. All these devices to improve teaching can never take the place of the personality, character, example and integrative and organizing capacity of the human teacher. All these things, on the contrary, will increase the need for teachers and stimulate better preparation of teachers. Also, many expert educators will be required to supervise and direct the preparation of these electro-audio-visual devices.

In the profession of Medicine, the discovery and invention of precision instruments of diagnosis, such as the x-ray, the electrocardiograph, the electroencephalograph, the basal metabolism machine, and hundreds of other mechanical and chemical aids has not made the doctor unnecessary, and never will. It is unlikely that any machine can ever be devised that will make a diagnosis of man's complex psychosomatic ills. Only the human brain, fortified by training and experience, will ever be able to do that.

Health educators need more audio-visual and mechanical aids. In certain areas, notably mental hygiene, sex education, and alcohol education there is an almost complete lack of such aids. But as these are produced we shall need more and better trained teachers of health.

Technological unemployment is a myth that should be embalmed in the extensive and growing archives of mythology.—Reprinted from Editorial, Health Education Journal, Los Angeles City Schools, June, 1947, p. 11.